

PATENT COOPERATION TREATY
PCT
INTERNATIONAL SEARCH REPORT
(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 2529177/VPA	FOR FURTHER ACTION	see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.
International application No. PCT/AU02/00611	International filing date (<i>day/month/year</i>) 17 May 2002	(Earliest) Priority Date (<i>day/month/year</i>) 18 May 2001
Applicant QUEENSLAND UNIVERSITY OF TECHNOLOGY et al		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:
 - ☐ contained in the international application in written form.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority in written form.
 - ☐ furnished subsequently to this Authority in computer readable form.
 - ☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - ☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☐ Certain claims were found unsearchable (See Box I).
3. ☐ Unity of invention is lacking (See Box II).
4. With regard to the title,
 - ☒ the text is approved as submitted by the applicant.
 - ☐ the text has been established by this Authority to read as follows:
5. With regard to the abstract,
 - ☒ the text is approved as submitted by the applicant
 - ☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is Figure No.

- ☐ as suggested by the applicant.
 - ☐ because the applicant failed to suggest a figure
 - ☐ because this figure better characterizes the invention

☒ None of the figures

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU02/00611

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. ⁷: G01N 33/569; C12Q 1/04, 1/68; C07K 14/30, 16/12; C12N 15/31; A01K 67/00; A61P 15/08; A61K 39/40, 39/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G01N 33/569; C07K 14/30, 16/12; C12Q 1/04, 1/68; C12N 15/31; A01K 67/00; A61P 15/08; A61K 39/02, 39/40

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPAT, JAPIO, CAPlus, Medline (infertil*; sperm/semen; miscarriag*/prematur*; ART/IVF/ICSI; organism/microorganism; Ureaplasma/Mycoplasma; Mollicut*; adhesin; adher*/bind*)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Nunez-Calonge, R. et al., (1998) Human Reproduction, vol. 13(10), pp. 2756-61. 'Ureaplasma urealyticum reduces motility and induces membrane alterations in human spermatozoa'. Whole document.	1, 8-13, 19, 22, 25, 29-32
X	Swenson, CE and O'Leary, WM. (1980) Archives of Andrology, vol. 5, pp 373-377. 'Examination of human semen infected with <i>Ureaplasma urealyticum</i> by fluorescence microscopy'. Whole document.	1, 8-13, 19, 22, 25, 29-32
X	Fowlkes, DM. Et al., (1975) Fertility and Sterility, vol. 26(12), pp. 1203-1211. 'Evidence by scanning electron microscopy for an association between spermatozoa and T-mycoplasmas in men of infertile marriage'. Whole document.	1, 8-13, 19, 22, 25, 29-32

☒ Further documents are listed in the continuation of Box C

☒ See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

22 July 2002

Date of mailing of the international search report

2 AUG 2002

Name and mailing address of the ISA/AU

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU02/00611

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Lingwood, C. et al., (1990) Journal of Cellular Physiology, vol. 142, pp. 170-176. 'Male germ cell specific sulfogalactoglycerolipid is recognized and degraded by Mycoplasmas associated with male infertility'. Whole document.	1, 8-10, 15, 19, 22, 25, 29-32
X	Shalika, S. et al., (1996) Human Reproduction, vol. 11(12), pp. 2789-2792. 'The effect of positive semen bacterial and <i>Ureaplasma</i> cultures on in-vitro fertilization success'. Whole document.	1, 8-13, 18, 20, 21, 24, 27-31, 34
X	WO 95/09870 A1 (IOWA STATE UNIVERSITY RESEARCH FOUNDATION) 13 April 1995 Whole document.	1, 8-76
X	US 5,369,005 A (Baseman et al.) 29 November 1994 Whole document.	1, 8-76
X	Styler, M. and Shapiro, S. (1985) Fertility and Sterility, vol. 44(1), pp. 1-12. ' <i>Mollicutes</i> (mycoplasma) in infertility'. Whole document.	1, 8-34
A	WO 92/11367 (MICROCARB INC. and HSC RESEARCH AND DEVELOPMENT LIMITED PARTNERSHIP) 9 July 1992 Whole document.	35-76

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/AU02/00611

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report				Patent Family Member			
US	5369005	US	4945041	US	5026636	US	5281694
		CA	1319335				
WO	95/09870	NONE					
WO	92/11367	CA	2098733	EP	563240	JP	6504670
END OF ANNEX							